Computers and composition: Theory and corresponding software

Susan Renee Montgomery
COMPUTERS AND COMPOSITION:
THEORIES AND CORRESPONDING SOFTWARE

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
English Composition

by
Susan Renee Montgomery
June 1993
COMPUTERS AND COMPOSITION:
THEORY AND CORRESPONDING SOFTWARE

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

by
Susan Renee Montgomery
June 1993

Approved by:

Dr. Milton Clark, Chair, English

6-7-93

Dr. Elinore Partridge

Dr. Susan Meisenhelder
ABSTRACT

Recently developed computer programs for English composition have attempted to include different elements of composition theory. Each theory emphasizes its own methods for teaching the writing process. Peter Elbow, for instance, believes that using freewriting as a means of generating invention is the most important part of teaching writing. On the other hand, theorists like Nancy Sommers and Donald Murray consider revision to be the most significant element in the writing process. From still another perspective, John C. Schafer and Geraldine Vale and other formalists believe that formalism which includes, but is not limited to, diction, style, and form should hold the highest priority for teaching writing.

Programs such as HBJ Writer, Writer's Workbench, Writer's Helper and Writer's Helper II among others like them have incorporated writing theories assisting students with writing problems such as writer's block, mechanics, i.e. spelling, punctuation, grammar and some stylistic areas as sentence lengths, wordiness, excessive "to be" verbs, slang etc.

This thesis will provide prospective readers, such as composition instructors, to whom this thesis is addressed with a sounder basis for evaluating both programs themselves and the reviews they have already received and applying the programs which best suit the assignment needs to the
composition classroom.

Instructors applying the writing theories to the software as part of their composition curriculum, can help students overcome writer's block and learn how to discover and revise their essays with new perspectives and perhaps some fresh ideas.
ACKNOWLEDGMENTS

I would like to thank my husband, Chris for his love, patience, and support while I spent so much time working on my thesis. I would also like to thank my children, Adam, Cody and Nathan for their patience and love while I wrote this thesis on "their time." I would also like to thank Darrell and Anita Montgomery for taking care of the boys so I could write this thesis. I would also like to give much thanks to Drs. Milton Clark, Elinore Partridge, and Susan Meisenhelder for their help and support which has been greatly appreciated! To my parents, Frank and Sue Crowder with love and thanks for the support and encouragement they have given me--how could I ever forget the story of "The Little Engine That Could"?
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>iii</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>v</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>CHAPTER ONE: Invention</td>
<td>3</td>
</tr>
<tr>
<td>CHAPTER TWO: Revision</td>
<td>25</td>
</tr>
<tr>
<td>CHAPTER THREE: Formalistic Surface Structures</td>
<td>40</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>74</td>
</tr>
</tbody>
</table>
Introduction

Computers and Composition: Theory and Corresponding Software describes theories of invention (prewriting), revision, and formalism or formalistic surface structures. This thesis also describes current writing software for English composition applying them in relation to the theories and their practical use in the classroom.

Chapter one--Invention discusses the theories of Peter Elbow who believes freewriting is the first step of prewriting, and Linda Flower and John Hayes who discuss the "rhetorical situation" with emphasis on audience and purpose. Computer programs Organize, Writer's Helper, and Writer's Helper II are described for their assistance with invention in the composition classroom.

In Chapter two, Donald Murray's Nancy Sommers' and Stephen Bernhardt's theories of revision are discussed. Murray believes that revision takes two forms, "internal revision" and "external revision." Sommers believes that most freshman composition students revise only lexically when they should be revising both lexically and conceptually. HBJ Writer, Edit, Writer's Helper, and Writer's Helper II are described and evaluated regarding their use in the composition classroom.

John C. Schafer, Geraldine Vale, Richard Coe, and Winston Weathers discuss their theories of form and structure, thus the title Formalistic Surface Structures.
Schafer believes punctuation is important, while Vale finds spelling to be important to the writing process. Coe considers form to be the catalyst for meaning, and finally, Weathers believes our style says something about who we are. Editor, Edit, Writer's Workbench and Mac Proof, and Writer's Helper II are discussed and evaluated according to the above theories and their use in the composition classroom.

Computers and Composition: Theories and Corresponding Software is intended as a reference tool for composition teachers interested in the integration of computers and writing. This thesis should give instructors an idea of which software packages are useful for invention, revision, and formalistic surface features (formalism). The composition instructor who reads this thesis should find the theories and software relevant to teaching English composition and may be surprised at the findings of the research on the software mentioned in each chapter.
CHAPTER ONE

Invention

Invention is the process of writing in which the writer creates ideas and formulates them into a complete written product. During this process, the writer explores the subject, discovers some new information, and relates it to prior knowledge; the writer then organizes the ideas with any necessary research and composition begins to take shape. The theories discussed in this chapter apply this definition in a myriad of ways, but all come to the same conclusion: invention is crucial to the writing process because one cannot edit or revise what one has not yet been invented. I will discuss the theories of Peter Elbow, and Linda Flower and John Hayes. From that point, I will discuss the different software packages according to the invention theories laid out and I will evaluate them based on the theories and on their practical use in the composition classroom.

Elbow considers freewriting the uninterrupted activity of thinking on paper (North 25). He asserts that although there are "times and places" in a piece of writing where one would pause and reread what has been written, the writer is "bound" to keep writing even if it's nonsense. In addition, these writings are seen as a part of a cycle. One reads the first such draft looking for a "center of gravity" that becomes the starting point for a second
draft, itself the basis for a third and so on. In the model Elbow describes, "the four hours that might produce a single finished paper, by more conventional means here produces four drafts in succession" (25).

Elbow believes some audiences are limiting and inhibiting to some writers making them feel foolish when they speak and causing them to stammer; this type of audience usually creates writer's block. In contrast, some audiences are inviting, making it easier to create more coherent text. He asserts also that there is a happy medium of the effect of audience awareness which only momentarily interrupts or disturbs the writer, but does not cause writer's block (25).

When most students, for instance, are asked to write for general readers or for the "educated public," they seem to write only in cliches or trite expressions which even the writers themselves don't believe. Elbow suggests that there is an obvious solution to the audience awareness problem, and that is to ignore audience, at least in the early stages of writing. During this stage of writing, the writer can direct his/her own words and thoughts to him/herself and ignore the reactions of the external audience. In discussing the benefits of prewriting, Elbow points to a relationship between one's intense awareness of audience and writer's block. Although ignoring audience might at first create weak text, the final product will be better in the long run and possibly even stronger (Elbow 51).
Elbow argues that writing with a particular audience in mind might and sometimes does "disguise our point of view" but Elbow comments that it's difficult to disguise something that is not yet figured out. What is important is to know "when to think about audience and when to put readers out of mind" (52). "Ignoring audience can lead to better writing and that 'writer-based prose' is better than 'reader-based prose'" (53).

Because freewriting is expressive, it is usually better than essays that have been constrained to a topic. He comments that professional writers turn out mediocre writing pieces because they have placed too much emphasis on the readers' reaction to the words. When a specific audience is given too much emphasis, the writing often becomes staged or pretentious instead of flowing and meaningful (53).

According to Linda Flower and John Hayes, discovery is emphasized as a "Eureka, now I see it" experience; however, the "Eureka" experience fogs the fact that "writers don't find meanings, they make them" (Flower and Hayes 21). Flower and Hayes use discovery to solve a rhetorical problem as an "elaborate construction which the writer creates in the act of composing" (22). For instance, if there is going to be an assignment on giving a new insight or perspective on Hamlet, then the writer would use discovery as a way of formulating questions. These
researchers confer that "writers build or represent such a problem to themselves, rather than find it" (22). They describe the rhetorical problem as breaking down into two major units. The first is the rhetorical situation which is the writer's given which includes the audience and assignment. The second unit is the set of goals the writer creates. The four main goals Flower and Hayes observed include: affecting the reader, creating a persona, building a meaning, and producing a formal text (24).

Creating an audience can often motivate a writer to write. The kind of effect the writer wants to have on the reader is the first focus the writer needs to consider. For example, does the writer want to create a personal effect on readers making them feel autonomous and optimistic and effective? Or does the writer want to create a general audience which to appeal (27)? Another goal the writer may choose to represent is the persona or voice; this establishes a relationship with the reader. When a persona is created, it is often expressed in a change of words or tone of voice the writer uses to express an idea. Many writers begin writing on a topic by exploring what they know about the topic and then writing about it. By creating a persona which is appealing to the chosen audience, the writer is creating meaning also. When they are making this attempt to create new ideas, they are
working on two ends of a spectrum; on one end, they are expressing ideas through what is available from their memory. On the other, they are trying new ways of analyzing and contradicting what old knowledge they have, and forming or generating it into new ideas about their topic. Writers may use different approaches when finally getting ready to write their text; they may "fictionalize, use a direct question, try a rhetorical question, or add some examples or little stories to 'flesh it out'" (29).

Invention programs such as HBJ Writer, Organize, Writer's Helper, and Writer's Helper II assist students with freewriting and audience awareness. When applying Elbow's freewriting, we can look at HBJ Writer and find two segments which specifically relate to his prewriting theory, Invisible Writing and Freewriting. Invisible Writing prevents the writer from seeing what is being written and therefore prevents premature editing. Freewriting encourages writers to type without pausing, again preventing premature editing (Bump 127).

With regard to Flower and Hayes' theory and the significance of audience awareness, HBJ Writer also features a segment called Nutshelling, which prompts the writer to give the purpose, audience, and main ideas. In addition, Planning assists the students with organizing and/or making meaning. Planning helps the writer organize the thesis and the positive and negative argu-
ments (if any) into a logical outline (127). Using this program, students or writers can begin to piece together their essays with organization and coherence while establishing their audience and purpose.

Another program which very basically applies the theories of Elbow, but especially Flower and Hayes is Organize. It assists writers in areas of developing ideas, anticipating and meeting audience needs, arguing an issue, planning for research, ordering and evaluating ideas, overcoming writer's block, and "gaining perspective for revising a draft" (Schwartz and Nachman ix). Organize applies to Flower and Hayes' four main goals for solving a rhetorical problem--affecting the reader, creating a persona, building a meaning, and producing a formal text. At first, the program concerns itself with its own set of goals: topic, thesis, audience, and purpose. As the writer proceeds onto the tutorials, the program goals are posed as simple questions to prompt students or writers to achieve their rhetorical goals before they begin writing.

Organize is able to assist students throughout the writing process. Schwartz and Nachman point out for example, that students or writers often find that during the planning stage of writing, writing ideas continually as quickly as they can without stopping is often helpful as one idea might inspire another and another; but if
the writer decides to stop and edit or correct a misspelling, the flow of ideas is interrupted and sometimes stifled. The only benefit from editing during the pre-writing stage is a few less errors or typos.

Organize is also helpful for finding different ways to organize ideas; for instance, the writer may choose to compare and contrast or to give a definition. Organize gives the writer the option to do both (not simultaneously). The writer is also capable of giving lists of arguments or cause and effect and then is able to relist them in the order which makes the most sense as many times as necessary. For example, if the student was writing an argumentative essay on capital punishment, the student would write a list in favor, which might include such arguments as deterrents to other criminals, justice for the victim, etc. The student then proceeds on to the arguments against the issue, listing and relisting as necessary. Once this is accomplished, the student then uses the list to organize a coherent essay.

Seven tutorials within the "Development" segment guide the writer through the topic. 'Definition' is used to define a term in various ways: using a synonym, "by considering what you should explain to achieve the purpose with the audience, by thinking of the term as a larger and then distinguishing it from other members of
the group" (36). 'Analysis' assists in analyzing and deciding how to break up the students' topics into smaller subtopics or subdivisions, and vary their orders. 'Description' helps the writer use description as a way to argue for the thesis before writing any lists of physical distinctions or functions by example or analogy.

'Compare and Contrast' instructs the writer to name items to be compared and contrasted using up to four categories. 'Narration' asks the writer to consider the subject and what important elements will help prove the thesis, and then asks the writer to list the events in order and if necessary, reorder them to give the text coherence. 'Cause and Effect' provides the writer with the decision to use either cause and effect or an effect of a phenomenon. After stating the pattern of cause and effect that the writer sees, the questions ask the writer to provide evidence arguing why the pattern identified is probable and not coincidental and showing the significance of the pattern (37). Each of the tutorials has a summary and revision section for editing.

The "Argument" segment has four tutorials which ask the writer to define the issue at hand. Once the issue has been created for the Issue file, the writer may then choose any of the four tutorials for assistance. 'Redefining the Issue' suggests that the writer explore the controversies about the topic before making
a claim. The writer is then to give reasons supporting the claim and pose questions the opposite side may give for the argument. When 'Testing for Validity,' the writer tests the reasons supporting the assertion by giving evidence and considering limits (exceptions, questions, and missing evidence). The writer has a chance to review and change the argument. The writer then gives evidence and considers limits for the opposing reasons with chance to review or change. When 'Ordering for Debate,' the writer reviews the reasons supporting the assertion and orders them from strongest to weakest. After ordering in this way, the writer reorders the reasons opposing the assertion or claim. 'Persuading the Audience' calls for the writer to consider the audience's needs and values. The program then prompts the writer to comment on the reasons (pro and con) regarding the audience's needs and values.

"Approaches" consists of three tutorials. 'Attitudes,' which Flower and Hayes would find interesting helps the writer explore various ways to introduce the topic and give it interest, clarity, and significance to the reader. The writer considers the topic in terms of his/her own experience, thinks of an illustrating story or analogy and discusses the significance of the topic. After this, process is complete, the writer may summarize and revise for editing. 'Outlinings' allows the writer to list the major points, any background information, an then
summarize how to support the major points. Again the writer is capable of summarizing and revising. 'Beginnings' presents a scratchpad for freewriting without any prompting questions.

For an invention program, this one is a good one as it gives the writer the capabilities to organize in many different ways. The writer may choose to use the "Audience" segment last in order to keep the creative juices flowing and not allow audience to create anxiety in the beginning of the writing process. Again Peter Elbow's theory of freewriting is applied to the prewriting software illustrating the importance of freewriting in the prewriting process. In contrast, Flower and Hayes' theory also applies to this program; the writer may use the "Audience" segment first, to establish an audience before writing. In any event, the writer can choose any of the segments or tutorials in any order and work with them as many times as necessary.

Writer's Helper and Writer's Helper II invention options provide extended use for prewriting. Three levels of prewriting aids guide the writer through the invention process with some ease. "Find a Subject" is the first level which offers the following aids: 'Brainstorm,' 'Lists,' and 'The Questioner.' 'Brainstorm' is a forced freewriting program based on Peter Elbow's Writing Without Teachers. Elbow believes the best way to start writing about a topic is just to start writing--anything. Free-
writing works on the principle that we all have so much to express if we could just express it. Elbow had his students write for five to ten minutes without stopping or going back to make corrections. Unfortunately, when most writers write this way, they tend to want to go back and correct everything they have just written; doing this tends to stifle creative thought processes and does not allow a smooth flow of ideas. 'Brainstorm' encourages students to write as quickly as possible without stopping. 'Brainstorm' is set up so that students are not capable of editing while they are writing; therefore, students may only freewrite without correcting errors (Wresch 31).

'The Questioner' asks the writer 20 abstract questions on various levels which can assist the student or writer in realizing the available range of subjects. Elbow's theory of prewriting or freewriting applies almost directly to this portion of the program, keeping in mind that freewriting encourages students or writers to write anything as long as they are writing without stopping. 'Brainstorm,' 'Lists,' and 'The Questioner' all provide a way for the student or writer to write freely even if a question is prompting the writing. After working with this segment of the prewriting activities in Writer's Helper II, I found that 'Brainstorm' and 'The Questioner' were most helpful for motivating freewriting; 'Lists' is most useful once a topic is found, and can induce creativity.
In the second category, "Explore a Subject," there are three options or activities students or writers can use. 'Crazy Contrasts,' 'Teacher's Questions,' similar to 'The Questioner,' and 'Three Ways of Seeing.'

Dawn Rodrigues et al. produced a program called Creative Invention; 'Crazy Contrasts' is borrowed from that program. Students using 'Crazy Contrasts' are asked to find similarities between their subject and up to 15 subjects very different from that of their own. As mentioned before, 'Teacher's Questions' is very similar to 'The Questioner' as it again asks 20 questions supplied this time by the teacher rather than by the program (Bump 128). This segment could work within Peter Elbow's freewriting theory because the students are writing whatever comes to mind regarding the questions although it is not just writing for the sake of writing. 'Three Ways of Seeing' is an application of Young, Pike, and Becker's in rhetorical invention of a matrix of nine ways to approach a subject. While looking at all nine approaches is impossible not to mention overwhelming, Young, Pike, and Becker asserted that "looking at a subject in isolation, as a process of change, and as one item in a network of related items is a reasonable alternative" (Wresch 34).

Students using 'Three Ways of Seeing' first name their subject; then they choose one of the following labels which is most applicable to their subject: person, place, thing
event, idea, or activity. From that point, 'Three Ways of Seeing' asks 12-15 questions "geared toward the chosen category" (34). The questions are then presented in three groups: isolation questions, process questions, and network questions; each group of questions is labeled.

Peter Elbow's theory is briefly illustrated in these activities; without editing is encouraged, but the activities are more structured than Elbow's freewriting.

Finally, the third level of prewriting aids is "Organize Information" which applies to Flower and Hayes' prewriting theory more than to Elbow's theory. "Organize Information" includes the following activities: 'Trees,' 'Debating an Issue,' 'Comparing and Contrasting,' 'Five Paragraph Theme,' and 'Developing a Single Paragraph.'

'Trees' assists students in organizing the material by asking the students to list 8-15 related items and then categorize them (Bump 128). For instance, if the students choose the subject "Education," the list of related items would consist of elementary school, middle school, high school, and college, and so on. The students would then give descriptions of each of the items; for instance, under high school, the students might describe the types of classes one takes in high school, teachers, homework, etc (Wresch 43).

'Debating an Issue' helps the student see both sides of an issue from the beginning. If the students see more
reasons on the opposing side of the chosen issue than for it, the program allows the student to change his/her opinion. After the list of reasons, the program asks the students to focus on the three best reasons for and against the issue; the student then develops an outline (Bump 128).

'Comparing and Contrasting' works on the same principle, but instead of listing "pro and con reasons, the students list similarities and/or differences between their topic and one more familiar to the audience" (128).

The 'Five Paragraph Theme' echoes Flower and Hayes' rhetorical situation as it focuses on the importance of purpose, audience, building meaning, and developing a formal text. When students first begin the activity, they start by stating their subject and purpose and then define an audience for their text. The activity asks for reasons supporting the student's views on the topic and then once all the information is complete, the "activity automatically formats the answers, writes an introduction and conclusion and displays a five paragraph theme" (Wresch 56). Although it seems as though the program writes the paper for student, in reality it is only illustrating a procedure for writing a well developed essay; the essay from the program is only a rough draft and should not be handed in as a final draft. The program will not allow the students to progress through the activity if they were unable to state a purpose and/or an audience, or if the students
left out any view points or did not give any at all. Instead, the activity will ask the students to gather more information about the subject (54).

'Develop a Single Paragraph' asks the student for an assertion statement (thesis statement) and then for four supporting statements. The activity contains two types of paragraphs, the description paragraph and the argumentative paragraph; both formats are the same, the assertion statement and four supporting statements. After listing the viewpoint, the students may organize the supporting statements in the order in which they will appear in the paragraph (52).

Because most of the previously mentioned activities from Writer's Helper also appear in Writer's Helper II, only the new activities from Writer's Helper II will be described and evaluated from this point on. The three categories are the same with some shortening of the titles: "Find," "Explore," and "Organize." During the description of these activities, one will be able to see how Elbow's freewriting theory is applied to each activity. The activities in the "Find" category are all prompt oriented; i.e. students respond to prompts to inspire writing. Although there are prompts to use rather than original thought from the students, the students are still encouraged to write freely based on the prompting phrases they are given.
The "Find" category consists of three new activities: 'Starters,' 'Idea Wheel,' and 'Associations.' 'Starters' provides 13 prompts or starter phrases the students can use as a way of beginning their writing (25). Because many students have difficulty opening their papers with an attractive phrase, 'Starters' provides thoughts to begin flowing (25).

'Idea Wheel' works on the same principle as a slot machine; three windows on the screen contain a word or phrase. Students push a combination of keys to "spin the wheel." The phrases spin around and result in a random combination of phrases; for example, some might be 'Oceans changed Charles Dickens,' or 'Franklin Roosevelt purchased democracy' (26). Many of the combinations may not make sense, but they should all prompt some insight by putting together new combinations of ideas (26). 'Associations' provides a set of 15 prompts for students to start writing. One word at a time is given, and the students respond with whatever thoughts come to mind. Some of the one word cues are "Haystack, Igloo, and Sleep," just to name a few (28). If students are used to freewriting, this activity should provide a fun way to get started writing as the students can write as much as they can think of for each word. Students will be reminded that there will be enough time for editing later and that they should just continue writing without stifling the creative flow (28).
The "Explore" category leans more toward Flower and Hayes' prewriting theory applying the rhetorical situation to the activities although that may or may not have been Wresch's original intention. The activities within the "Explore" category are geared more toward audience and purpose than toward freewriting as that should have been used in "Find." "Explore" contains three new activities also: 'Audience,' 'Random Revelations,' and 'Connections.'

'Audience' assists the students with learning more about their audience by asking nine questions about the readers. The questions prompt the students or writers for a topic and a description of the readers which would include the reader's feelings toward the topic, positive and negative aspects of the reader, the students' motivation to create those feelings, and finally, the main point being directed at the reader. Using the questions from 'Audience,' the students think about their audience in a different way. However, it is best not to rely on 'Audience' alone because four additional activities in the Revising Tools of Writer's Helper II are also helpful in assessing audience needs (37).

'Random Revelations' provides students with statements about their subject by having them enter their subjects and then "spin" one of two wheels, the verb wheel or the activity wheel. The verb wheel contains the verbs "won't
might, will, should, can't and would" (37). The completion wheel contains such phrases as "change rapidly, impress most people, bring out greed," etc (38). Examples of some statements which might be created by 'Random Revelations' could be "Television, will stir hatred; computers will impress most people; or California can't matter in the future" (38).

After students have found a statement they can use, they can go to the "Note Pad" and start writing about their subject. Once taken to the "Note Pad," this activity reflects Elbow's freewriting theory. The students would use their subject to start the freewriting activity; they would write as much as possible about their subject without stopping to edit. This would keep the creativity flowing without thoughts being stifled with the worry of spelling, grammar, and other mechanical concerns.

'Connections' assists students in looking at the subject. Students begin by listing 20 phrases about their subject; the phrases are placed into one window on the screen and copied in another so that both are partially visible. "Students then "spin" each window until elements in each list line up with one another" (40). For instance, if the subject was college athletics, the students might create a list containing such words as "football, booster clubs, television, large revenues, NCAA violations, steroids, professional careers, scholarships, and tailgate
parties" (40). From this point, 'Connections' might create such random connections as "large revenues (==) NCAA violations" or "steroids (==) scholarships" (40). The main point of this activity is to point out to students any connections within their subjects they may have otherwise ignored. Instead of students choosing ordinary associations between items in their subject, 'Connections' points out relations between items that might be unusual, yet more interesting than traditional associations.

Again Peter Elbow's freewriting theory becomes applicable as students turn to the "Note Pad" to describe the connections of the two items. Freewriting can apply itself to many different areas of prewriting. Having or not having a subject makes no difference in freewriting. The idea is just to write without stopping or editing to allow creative thoughts to flow smoothly without interruption.

Since we have discussed the theories and programs and showed integration of both, let's now move on to classroom application of the programs discussed in this chapter.

Looking at HBJ Writer and its freewriting and invisible writing activities, let's examine their potential for the writing classroom. First, freewriting used as a tool for prewriting is useful to most students learning how to write their thoughts down on paper, in this
case, on a computer screen.

Invisible Writing can be applied to those students obsessed with editing while they write. It may also be a precursor for freewriting for other students not knowledgeable of writing and simultaneous editing. Once students become proficient at Invisible Writing, they can move on to Freewriting without any, or at least as many inhibitions about writing and editing as they may have had before. 

HBJ Writer is applicable mostly to novice writers especially those with writing fears; on the other hand, experienced writers who may still face writer's block will also benefit from the Freewriting and Invisible Writing activities provided in this program. This program is applicable for students starting in elementary school through graduate school and beyond; just from reading the information about HBJ Writer, it seems simple enough for almost any age to use.

Although this program does seem to be a successful pre-writing program, it is only the beginning of invention heuristics and with respect to Peter Elbow, other pre-writing programs exist and can prove to be even more helpful and elaborate than HBJ Writer.

Organize is a good follow-up program to HBJ Writer as it organizes the document according to description, narration, argumentation, definition, etc. After using this program, I would recommend its application as it proves
itself to be a complete prewriting program, starting with freewriting exercises and progressing to constructing an organized essay. Its application in the composition classroom will help students become more proficient at organizing essays, and possibly with time completely eliminate the students' need for the computer.

Of all the prewriting programs mentioned in this chapter, Organize, Writer's Helper, and Writer's Helper II prove to be the most helpful to composition students because they are so complete in their efforts to help students move from basic freewriting to discovering more interesting and creative ways to begin writing about their subject. In addition, activities such as 'Paragraph Development' and 'Five Paragraph Theme' assist students in creating a well-developed essay. Because Writer's Helper II does contain nine more prewriting activities than the original Writer's Helper package, the students have more capabilities for writing. Organize has some competition with Writer's Helper II as it helps students move from freewriting to organizing a well-developed essay. These programs demonstrate the most flexibility regarding academic or professional application. These three programs apply to students starting at approximately grade eight through graduate school. It would be reasonable to assume that professionals would find these programs suitable to their needs as well. HBJ Writer though a helpful prewriting
program for freshman students or novice writers, would not be as helpful to the advanced college writing students or professional writers as they would find it too limiting. HBJ Writer, as mentioned earlier in this chapter, focuses on invisible writing; this is a fine start, but there is more to prewriting than not seeing what you are writing.

When shopping for software for English composition, look for software packages which contain all stages of the writing process: invention (prewriting), composing, and revising. These types of programs should be as accommodating as possible so that the students are not limited to freewriting or invisible writing, but can use them as a catalyst to creating an organized essay.
CHAPTER TWO

Revision

Revision involves "rethinking" the text and making significant alterations in content and organization. It also includes sharpening the focus, developing new ideas, and rearranging ideas as part of the process. One finds in reading the theories that one idea is consistently repeated; revision should not be considered a final process (as seems to be taught in most composition classes today), but rather a progressive stage of writing. As most writers revise, they continue to discover new ideas about their topic and incorporates some prewriting strategies while they are revising. Much of the revision software functions similarly; for instance, HBJ Writer contains a revision aid which focuses on organization (an organizational review); Edit assists the student in areas of audience and purpose, and Writer's Helper II guides the student through the revision process and then may refer the student back to the prewriting section of the program for purposes of organization.

Within this chapter, I will discuss theories of revision and describe and evaluate corresponding software for practical use in the composition classroom.

Donald Murray holds the opinion that revision has two principle forms, "internal revision" and "external revision." Murray is convinced that they are very
Murray also believes that although both types of revision are important, "external revision" seems to get more attention than "internal revision," therefore Murray focuses more attention and provides more information about "internal revision."

"Internal revision" as defined by Murray is "everything writers do to discover and develop what they have to say beginning with the reading of the first completed draft" (91). While reading their first draft, writers are reading to discover their content, form, language, and voice. Writers concern themselves with finding out where the content, form, language and voice have led them so far. The writers use their information, structure, and language to discover what they are trying to communicate to the reader. The audience at this time is only the writer (91). In addition, during the process of "internal revision," writers move through the whole document from the whole page to a single word and back to the whole page again (92).

"External revision," on the other hand, is the process writers use to discover through language, structure, voice, etc., what has been found and communicates the information to the reader. Writers working in "external revision" are interested in the conventions of form and language, mechanics and style. During this time an audience is found and written to for appeal. Writers at this point learn to
become more objective about their work. They also become interested in giving it "polish" as professionals use the term to give its appearance more luster (91-92).

While conducting research in his educational facility, Murray has found that during "internal revision," four aspects of discovery are often used: information (content), form and structure, language, and voice, all of which Murray finds important in "internal revision." Information is a tool all writers use and must have in abundance. Although most English professors and linguists tend to focus on structure and style, the writer concerned with "internal revision" is "looking through the word, or behind the word, or beyond the word for information the word itself will symbolize" (93). While involved in "internal revision" the writer must gather information and/or draw upon previously gathered information and be able to relate specific bits of information to other bits of information.

Equally important are form and structure. Form is a kind of meaning—a way of piecing together information. For instance, stories all have a beginning, a middle, and an end just as life also contains a beginning, a middle, and an end. Structure then, puts the information into an order, a way of bringing order to chaos. Next, writers choose language which builds meaning by choosing words, rejecting other words, bringing words together, and reordering words to bring meaning to the information (93).
Finally, Murray considers voice to be an important factor of "internal revision" which he deems as considerably separate from content, form, and language. Voice is what writers (as readers) use to hear what is being said; when writers use voice they hear their point of view about the subject, the authority, and their distance from the subject which is extremely important during "internal revision" (93).

Although Murray considers "internal revision" and "external revision" two very separate editorial acts, it is important to realize that both must be used in the whole revision process. Nancy Sommers comments in her article "Revision strategies of Student Writers and Experienced Adult Writers" that revision is seen as a linear activity and a final stage of writing rather than a progressive stage (Sommers 119). According to Sommers, "isolating revision and then disregarding it plays havoc with the experiences composition teachers have of the actual writing and rewriting of experienced writers" (120).

Sommers, dissatisfied with both the linear model of writing and the lack of attention to the process of revision conducted by a study examining the revision processes of student writers and experienced adult writers to discover what role revision played in their writing processes. Sommers states that during the course of her work, the "revision process was redefined as a sequence of changes in composition--changes which are initiated by cues
and occur continually throughout the writing of the work" (121).

Sommers' methodology was based on a case study approach. She used student writers (20 freshman) and adult experienced writers which included journalists, editors, and academics. They were all instructed to write three different types of essays: expressive, explanatory, and persuasive and to rewrite each one twice for a total of nine written products in draft and final form. The essays were analyzed by counting and categorizing the changes made. Four revision procedures were identified: deletion, substitution, addition, and reordering; and four levels of changes were also identified: word, phrase, sentence, and theme (121).

Sommers explains that many of the students she studied did not use the term revision, nor did they feel comfortable using the term. The explained that revision was not a word they used, but one their teachers used. The students had created various functional terms to describe the types of changes they made such as scratching out and doing over, reviewing, redoing, and slashing and throwing out. These definitions described the students' revision as changing words and sentences that didn't sound appropriate to the students by slashing or crossing out the unnecessary words or phrases (121-122).

In addition, Sommers comments that the aim of the
students was to clean up speech; their approach to revision' was labeled by Sommers as a "Thesaurus philosophy of writing" (123). The students believed that the best way to rewrite was to change the words and that rewording was the main problem they saw in their essays. Sommers found that the students had more interest in making lexical rather than conceptual changes which created a blindness to textual changes. She comments that their blindness to needed textual changes prevented them from reviewing their work again with new eyes, so to speak, and starting over (123). The students Sommers studied could handle the strategies for words and sentences, but they needed a set of heuristics to help them with reasoning or asking questions about their purposes and readers (123). Whether she realized it or not, Sommers' students involved themselves with some form of "internal revision," or at least used language to build meaning for the readers. Although they did not seem to show interest of working with form and structure, information and voice, they did choose their language carefully to build some meaning to their text. While Sommers' students only used one-fourth of the aspects mentioned in Murray's "internal revision" process; the experienced adult writers used all four in addition to their mechanical clean-up or "external revision."

The experienced adult writers concentrated on all levels of revision; some rewrote while they wrote others
looked for the argument and structured and restructured in addition to making lexical changes. They also, after a concern for form, considered their audiences and made some revisions accordingly. Sommers states, "But these revision strategies are a process of discovering meaning altogether" (125-126). Exactly what Murray would say! One can see that Sommers and Murray share the same approach to revision: while the lexical changes are important, looking at form and structure, language and voice pay greater dividends during revision.

According to Stephen Bernhardt, revision is important and should be measured; however, Bernhardt also believes that it should not be measured with impromptu essays but with take-home assignments instead. Bernhardt asserts that many students, when not given enough time in the classroom to revise make only lexical changes in their essays--changes of words, punctuation, grammar, and spelling, for instance and do not focus on conceptual changes.

Bernhardt gave his students in-class assignments, but unlike Sommers, he made copies of them, returned the copies to his students and gave his students the opportunity to revise their essays at home. Bernhardt found that the revisions done at home were better, in some cases by 2 points, than the papers done hastily in the classroom. Out of 117 students, 66% improved their scores by 1 point, 37% improved by 2 points with the largest improvement gain
being 7 points; 19.5% retained the same score, and 14.5% decreased their score. The essays were evaluated based on development, syntactic fluency, introduction/conclusion, paragraphing, organization, manuscript, appearance, cohesion, diction, and punctuation.

Bernhardt's results showed that given time, students not only revise lexically, but also conceptually. The students revised on all levels adding length, improving their introductions and conclusions, and rewriting their sentences for fluency and correctness. In addition, the students also corrected their errors and actually reduced their errors of spelling, fragments, and construction shifts. They reduced other error types by 29% and punctuation errors by 15%. Bernhardt suggests that basic writers, if given time, can revise and not simply edit.

Bernhardt's students may have unknowingly used Murray's revision strategies for revising their essays—using both internal and external revision for reducing their errors and increasing their scores. Both are important in the revision process; if the students in both Sommers' and Bernhardt's study had only used "internal revision," there would still be lost meaning. There is really nothing wrong with "external revision" at all, but revising both internally and externally give the paper fluency, meaning and a lustrous appearance.
Fortunately, software has come along to assist students with revision both internally and externally. For instance, HBJ Writer, Editor, Writer's Workbench, and Writer's Helper II.

HBJ Writer helps the students in areas of organization, style, and mechanics. Within the "Organizational Review" is a segment called 'Nutshell' which prompts the writer for a title, purpose, audience, and a brief summary of the document to ascertain whether the thesis has remained consistent throughout the document. The "Transition and Pronoun Search" however, highlights common transition words and pronouns and lack of pronoun antecedents. Within the "Stylistic Review" students or writers can find out the total number of words, sentences, and "to be" verbs within the sentences. In addition, students can access the total number of prepositions and infinitives and their ratio to the other words. Finally, we have the "Mechanical Review" which highlights words that often cause difficulty for student writers, such as homonyms, and words like "affect" and "effect." This review also checks for usage of parentheses, brackets, quotation marks, elipses, question marks, and punctuation following certain words as well as misspellings. Murray would find this particular program suitable for working with both internal and external revision; the "Organizational Review" would be helpful for students working with "internal revision," while the other segments
of the program are more suited toward "external revision."

Although I was unable to access this program and work with it personally, the information provided by Jerome Bump provided insight on HBJ Writer in his article "CAI in Writing at the University: Some Recommendations." The program seems to be one which could be used for both novice and experienced writers as it works on a conceptual revision process; that is, it combines the organization and style with the mechanical works within the revision process. The program applies itself well to Donald Murray's, Nancy Sommers' and Stephen Bernhardt's theories of composition which all express concern for revising holistically or conceptually.

Writer's Helper II is another program which assists students on all levels of revision both internally and externally, applying to all the previously mentioned theories. Writer's Helper II consists of three areas of revision: "Structure," "Audience," and "Checks." "Structures" contains eight proofreading activities which move in from the document itself to finally the words themselves. They assist the writer in reviewing the document for errors in organization, coherence, development, sentence lengths, type of writing ('Category Match'), subordinate clauses, and word frequencies. The proofreading activities, one may notice, work very much like Murray's "internal revision," moving from the document to the word of the
"Audience" includes seven proofreading activities which help the writer with areas of readability, diction, transitions, prepositions, pronoun references, "to be" verbs, "Sweet or Stuffy" language. Each of these activities helps the writer move closer to the audience and its needs. Using these revision activities, the writer can successfully manipulate words, phrases, sentences, and paragraphs to achieve a desired audience.

"Checks" consists of three proofreading activities helping the writer in such areas as usage, homonyms, and gender. "Usage" obviously helps with word usage errors. "Homonyms" checks for the misuse of homonyms and gives definitions for each homonym. "Gender" checks for gender biased words and phrases.

Because **Writer's Helper II** works on all levels of revision, the program is appropriate for writer of all levels, novice and experienced. The program gives suggestions for improvement and revision so the writer is not left with just a red flag on an error. It seems to correspond to all the theories mentioned and Murray, Sommers, and Bernhardt would probably find much success with the students' revision as it does work on a conceptual level rather than just a lexical one.

**Editor** does focus more on "external revision" strategies than on "internal revision" strategies; however, it is
important to note that while "internal revision" is important, "external revision" has its place, and a very important one, in the revision process. Editor, similar to HBJ Writer, assists students in areas of wordiness, cliches, slang, jargon, vagueness, poor usage of monidiomatic phrases, gender based language, spelling, punctuation, and grammatical errors. Using programs which carry a primary focus on the mechanical areas of revision is important because they assist students with removing the glitches from their papers. Editor contains two options, hard copy and usage option. The draft option gives the students a printout of their essays. The usage option contains four dictionaries: FIX, TIGHTEN, POLISH, and CONSIDER (The FIX dictionary will be discussed in Chapter three—Formalistic Surface Structures). The TIGHTEN and POLISH dictionaries cover wordiness, redundancy, trite expressions, and cliches. The CONSIDER dictionary assists students with additional writing problems. Although the program is helpful, it is not a perfect program as it may mistakenly flag an error, or for that matter, may miss an error. Therefore, students need to be aware of what is correct and what is not. Editor does give a count of "to be" verbs, which does not necessarily indicate that they are wrong, just possibly overused in the document.

Editor is a helpful program for novice writers and
lends itself primarily to "external revision strategies. Working with the program, I found it to be very efficient in finding errors in my document that I hadn't even considered errors. Murray, Sommers, and Bernhardt would more than likely find this program helpful and resourceful for their students as long as the students worked on "internal revision" as well. Sommers and Bernhardt seemed to need a program that would help their students with both areas of revision. This program would help at least with some of the lexical changes in a way that their students perhaps never thought of and teach them how to revise better lexically.

Although I did not have personal access to Writer's Workbench, I did find some information about the program. After reading the information, I found Writer's Workbench to be a useful tool for the revision process. While it gives the student writers a chance to work on jargon and other types of mechanical errors, it also provides helpful suggestions for revision specifically in area of passive and active voice— not to be confused with the type of voice Donald Murray discusses in his theory.

Writer's Workbench assists students with sentence variation, wordiness, punctuation, misused phrases, and readability. All of these assist students in working with and audience. In addition, the program provides a table of substitutions for phrases—wordiness. However helpful this
program might be, Christine Hult and Jeanette Harris comment that some misused phrases may be missed and if the writer uses jargon for a specific discipline, the Workbench may be unable to identify it and may mark it as incorrect (Hult and Harris 101).

The Workbench applies to both internal and external revision although it seems to fit more appropriately into the "external revision" category Murray discussed. While it is not a perfect program, Murray Sommers, and Bernhardt would probably refer to it for a brief overview of their (the students') papers checking them for the problem areas previously mentioned.

*HBJ Writer, Writer's Helper II, Editor, and Writer's Workbench* cover the problems most writers encounter during revision applying to the concerns of the theories mentioned earlier, *Writer's Helper II* seemed, through hands-on research and evaluation, to be the most valuable for conceptual revision; it covers not only organization, form structure, voice, etc. but also the mechanical areas of revision as well.

In regard to the programs' claim to success, none of the programs mentioned here or anywhere are 100% successful as they are written by humans. The programs are only as successful as their user(s); that is to say that if the user does not use the programs to their full potential and learn from them, then the programs cannot
be deemed completely successful. While these programs are useful in assisting the students or writers in the areas the programs mention, the programs will not work any miracles on the students' essays; but if the students are willing to learn, the programs can help the students develop better revising skills.

Teachers do need to take care to teach their students discretion when working with any software programs which "flags" errors. Because humans write the programs, they (the programs) are not always correct. Students then need to be aware of which flagged errors do indeed need revision and which ones do not.
CHAPTER THREE

Formalistic Surface Structures

According to Richard Fulkerson in his article, "Composition Theory in the Eighties: Axiological Consensus and Paradigmatic Diversity," formalists are described as those who are concerned with "specific formal features, most often correctness of the sentence level, but conceivably privileged style of sentence or structure for a paragraph, or even the five paragraph format for a paper" (Fulkerson 409). However, linguists might argue that formalism is more focused on structure than on surface structures within the text. However, since I will be describing elements of both formalism and surface structures, I will combine terms as 'formalistic surface structures.' I will be discussing the theories of John C. Schafer, Geraldine Vale, Richard Coe, and Winston Weathers. I will then discuss and evaluate software programs and integrate them with the theories illustrating the practicality of the combination for the composition classroom.

John C. Schafer believes in teaching punctuation not only during the writing process, but as part of it. He also believes that punctuation is often overlooked by most instructors and has been in the past slighted by the role of prewriting during the writing process. Schafer also holds the opinion that punctuation, if taught in a more positive light, can be used to achieve clarity and create voice
within the text. Although most students or instructors don't seem to show much interest in or use for punctuation, Schafer comments that when punctuation is used correctly, it has only a noticeable difference some of the time; however, when punctuation is used incorrectly, the effect is almost always noticeable (Schafer 46).

According to Schafer, applying grammar as a foundation for correct and effective punctuation is a necessity since one cannot master punctuation without having some knowledge of grammar. In addition, Schafer comments that if grammar is taught applying discovery and sentence combining, and if instructors combine the acts of "learning grammar, making sentences and marking sentences" students might find punctuation to be a more enjoyable activity (48). Accordingly, Mina Shaughnessy believes that instructors should "teach punctuation as a process of making not simply marking sentences" (Shaughnessy 28).

Punctuation is an aid for discovery as well as marking sentences and structures; therefore, it shouldn't be set off in the mechanics part of the course. Schafer asserts that punctuation shouldn't be taught later in the process, but instructors should alternate between indirect and systematic instruction. Unfortunately, many instructors have good intentions of teaching punctuation, but do not seem to have time to do it—or never get to it. Most instructors seem to teach writing in linear form, first teaching pre-
writing, revising, and then editing with little emphasis on punctuation. Schafer states, "Punctuation instruction delayed becomes punctuation instruction denied" (Schafer 48). In other words, instructors who are delaying teaching punctuation are denying their students knowledge of its use not only mechanically, but also creatively. Schafer also comments that instructors mistakenly teach punctuation in a linear form much the same way they teach writing. In addition, Schafer adds that since writers don't write in a strict linear form of prewriting, revising and editing paying little attention to punctuation, instructors should not teach in this form either. According to Schafer, most writers write recursively, and some composition instructors teach the same way. If punctuation is taught with sentence combining activities, then it can be taught to achieve fluency (49). Finally, Schafer comments that if teachers use the above suggestions, they will not only teach punctuation more effectively, but they will also by bringing process and product together, teach writing more effectively (49).

According to Geraldine Vale, in 1970 proponents of the writing process discounted spelling as 'mere-mechanics' and since scorned it as obsolete by spellcheck software vendors. Vale's intention in her article is to shed some light on what she hopes will be a growing body of literature (Vale 54). Vale comments also that she does not put spelling
as a primary priority in her eleventh grade curriculum even though most of her students need to improve their spelling. She knows that when giving the students an assignment that ranges from six to twenty-six pages, after multiple revisions, by mid-year the spelling errors will be averaging around five (in total) on the final copies (54).

So how important is spelling to Vale? Vale goes beyond teaching spelling rules herself to the class by having her students create their own list of misspelled words from current and past papers. Students typed their misspelled words on a computer as many times as they had misspelled them. After completing this task, they used a spellcheck program to produce and alphabetized list of misspelled words and the number of times each misspelling had occurred. The students then began their task of eliminating misspelled words from the original calculated list of 256 words. In addition to being given spelling rules, they created and discovered their own rules as well. The students then taught each other, as peer teachers, the rules they had created and discovered; many of the other peers found this activity to be a fun and interesting way of learning rules. The activity ignited a spark of interest in most of the students giving them a chance to learn not only how to spell more words correctly, but also how to use rules they could apply and remember (54-56).

Similar to Schafer’s comment on punctuation and the
noticeable effect when done correctly or incorrectly, misspelling stands out in the text and tends to reduce any respect for the text the reader may have had previously. Misspelling, as an analogy, is like a glitch in a piece of film. The composition (no pun intended) of the picture is perfect except for the scratch or glitch. Similarly, misspelling is a glitch distracting the reader from the composition. The content, form, sentence structure, and all the pieces of surface mechanics may be perfect, but if misspelling is dominant in the composition, then almost all is lost.

Although mechanics are important in surface revision, we must not forget that form is also essential in this area of study. According to Richard Coe in his article, "An Apology for Form: or Who Took the Form out of Process?" "There is not meaning without form" (Coe 16). Coe states that information is made by putting data in "formation by forming" (16). Coe asserts that form can be identified in terms of its function in a forming process. The definition Coe gives is intentionally wordy; he defines form as "whatever is used to inform-to impose pattern on noise, cosmos on chaos" (17).

Coe comments that form is persuasive because it "shapes our attitudes and guides our responses to situations" (20). As an example, Coe uses compare and contrast to model the bureaucratic form which allows us to "know that there are
two sides to a question or issue" (20). This form motivates the reader to look for other side. Thus, in this sense, form is generative or developmental. Form may be generative because it motivates us to search for more data; however, "any form also biases the direction of the searching and constrains against the discovery of information that does not fit the form" (20).

From a pedagogical point of view, this form can be constraining for the students' messages--this problems comes from the standard formal technique for achieving focus. Thus if taught this way, form can be ideological. Coe asserts that the examples he gives prove that form is a variable. He believes we need to study form and forming much more carefully and in many more ways that we have: "form as organic, as construct; as flexible, as rigid; as generative, as constraint; as an instrument of creation and meaning; as the social penetrating the purpose" (20). Burke warns us "not to confine the explanation [of form] to one principle, but to formulate sufficient principles to make explanations possible (Burke 129).

According to Coe, learning socially significant forms and understanding their function and how to use them appropriately is a "key to success in a discourse community" (Coe 21). This is especially true in schools as schools serve at least in part to teach some forms or at least weed out those who don't know them (21). Therefore,
Coe comments that it does matter that we, as teachers, continue to teach the basic forms "which constitute a condition of access to professional discourse and hence, to professional communities in modern societies" (21). It is also important how we teach these forms--regarding their functions in various writing processes and how they suit or confine "the creative process, how they enable or disable communication, how they structure what happens in our minds, and how they mesh with social processes (21).

Coe also comments that we should teach form in context (as we do other rhetorical factors). Form should be taught according to appropriateness and effectiveness. He asserts that form should be explained in academic and other professional discourse such as "academic, scientific, professional—and textbooks" (22). Formal patterns should be treated as representing mental functions and placed functionally in the creative process (22). For instance, Coe starts with narration and description because these two modes are ordinarily formed chronologically as the story is being narrated, or as the description is arranged. Coe comments that "studies in contrastive rhetoric demonstrate that even narration and description are not simple reflections of reality; on the contrary, they vary significantly from one culture to another" (22). Coe gives an example in which he states that place in the story is important to aboriginal Australia, but they state it near
the end; when a story is translated for Anglo-Australians, the place is generally moved to the beginning "where English form demands it" (22).

Coe concludes his argument by suggesting that instructors should teach a "New Rhetorical" kind of process writing with form while applying a theory, but mostly using hands-on practice. Doing this can help their students "develop an awareness of form as simultaneously constraining and generative that will empower them to understand, use, and even invent new forms for new purposes" (26).

Similar to Coe's theory of form and its importance in composition, Weathers advocates teaching students about style and states that there are three pedagogical 'tasks and obligations' when teaching students style: "(1) making the teaching of style significant and relevant for our students; (2) revealing style as a measurable and viable subject matter, and (3) making style believable and read as a unit of our own stylistic practices" (Weathers 187).

Weathers comments that if we are going to teach our students style, we must confront them not only with the discipline, but also with its justification. According to Weathers, when teaching literature, we focus on communication; unfortunately however, we seem to neglect the task of relevance completely (187). Style has importance with our communication as it changes our language from black and white to 'technicolor.' Our style reveals our attitudes
and values not only to our readers, but also to ourselves. As Weathers pointed out, "style, by its very nature, is the art of selection, how we choose says something about who we are" (187).

If we are going to make style possible for our students, then we must teach them some specific skills:

(1) how to recognize stylistic material, (2) how to master this stylistic material and make it part of a compositional technique, (3) how to combine stylistic materials into particular stylistic modes, and (4) how to adapt particular stylistic modes to particular rhetorical situations (188).

By teaching these how-to's we are offering our students a chance to learn a modus-operandi for learning style and a general application strategy. In this way, style becomes real, "a true discipline, a true art" (188).

It is important then to identify style or the substance that makes it of which there are three general kinds: "individual words, collections of words into phrases, sentences and paragraphs, and larger architectural units of composition" (188). When most students enter college, they gain a larger collection of usable stylistic material. The instructor's job is to take what the students know and lead them to larger storehouses of material they can draw upon (188).

According to Weathers, when teaching students style, teachers must realize that students are looking for and need strategy or style. Teachers can establish a strategy
for their students by doing two primary things: (1) "identifying the categories of style, and (2) describing the constituency of these categories in terms of stylistic material" (190). First, when using categories, we all choose styles which reflect who we are and the way we see things; on the other hand, some teachers still use the "four levels of style acknowledged by Demetrius" (190). Others might use the somewhat conventional stylistic levels of usage--formal, informal, and colloquial. Some teachers prefer to use more elaborate categories of style: certitude, judiciousness, emotion, and absurdity or "tough, sweet, and stuffy." Finally, there are those who may use a two category system of plain and literary style. Whatever way categorizing we choose, "we must identify some set of categories to serve as a framework in which various styles can be achieved.

Second, establishing the constituency of the categories is, or should be all important to the writing instructor. When teachers teach style, they must teach their students that certain stylistic material may apply in one area, where other stylistic material may apply in another and that certain types of combinations create still other styles. Therefore, teachers should always be discovering the characteristics of style and illustrating them to their students (190). After teachers have given the students the 'primary conditions of strategy' of identification and description
of the categories, then applying the exercises to these strategies can begin. Weathers discusses exercises which help students learn how to use different stylistic material creatively.

First, the students are asked to write down all the verbalizations they can think of for a given message. After this task is completed, the students are then asked to allocate and categorize into styles the different verbalizations on the list. After practicing the exercise over a period of time, and with guidance, the students will hopefully come to the realization that almost any verbalization has certain stylistic characteristics (190).

Second, the students write a paragraph on any topic and then transform the paragraph into another style; for example, the students might first write on the topic 'campus politics' in a journalistic style and then write on the same topic using a military style, using what facts, observations, and opinions they have. Weathers points out the purpose of this exercise is to teach students to add or subtract or substitute particular stylistic materials so as to change one style to another. Ultimately, by means of this transformational exercise, the students will be able to decline-as it were-any sentence, paragraph, or essay through all possible styles (191).

Finally, after learning the different strategies, the students are asked to write a complete composition. However, many teachers fail to teach style to students piece by piece,
bit by bit; instead they plunge the student into full composition.

With regard to the theories previously discussed, let's apply them to some software programs, namely Editor, Edit, Writer's Workbench and Mac Proof, and Write's Helper II. When applying or integrating the theories with the software, I will take punctuation and spelling as a unit with the area of surface features and form and style as another unit with the area of formalism. One might notice that certain software programs are applicable to both the surface features and formalism giving the software multiple uses for the writing student.

When applying Schafer's and Vale's theories on punctuation and spelling, we can refer to such programs as Editor, Edit, Writer's Workbench and Mac Proof. Editor is a useful tool for surface feature editing as it assists the students with punctuation, and spelling among other mechanical problem areas. As discussed in the revision chapter, Editor consists of four usage dictionaries; the FIX dictionary identifies the punctuation and spelling errors. If students have difficulty with an area of punctuation or spelling or any other mechanical area, they can refer to the writing problem code letter in brackets; the student then presses the letter of the immediate writing problem and an explanation about the writing problem appears on the screen. What I found helpful about the
feature was the capability of having a handbook at my fingertips rather than having to search for a handbook, find the right page and so on; all I had to do was press a letter, and voila, an instant handbook on the problem at hand appeared.

The CONSIDER dictionary examines the document for unnecessary gender-based language, slang, jargon, colloquialisms, awkward expressions, and commonly misused terms as this seems to be a common problem of misspelling among many students. Used together, the FIX and CONSIDER dictionaries should be able to help students gain a better understanding for punctuation and spelling and their correct usage. In addition, the combining use of these two dictionaries also apply to Schafer's and Vale's theories in these two areas of structural editing. Of course, most instructor's who have any teaching experience at all will teach their students more than punctuation and spelling in the surface structure area, grammar and usage for instance. Although grammar and usage are important facets, punctuation and spelling seem to show dominant error in freshman college writing, hence the reason for discussing them.

Edit examines documents on four levels of writing: word level, sentence level, paragraph level, and an overall level for the entire document. The word level inspects the document for punctuation errors while the sentence level examines the document for fragments, unnecessary
long sentences, and subject/verb agreement problems. The paragraph level, however, inspects the topic sentences and concluding sentences of each paragraph along with transitions. Finally, the overall level checks for development of ideas, word count statistics, sentence-lengths, and varities and gives a post-writing analysis.

Although the program appears to edit on all levels, one may notice that spelling is not featured at the word or sentence level. Schafer would find this program useful as he would be able to use all three levels to illustrate how to use punctuation effectively in the ways he discusses in his article. On the other hand, Vale would be disappointed in this program as it does not consider spelling as part of its editing features. This program seems to be lacking in completeness because of its lack of a spellchecker within the word level. If a program is going to edit a document completely, the spelling should be part of the program's capabilities; as Vale mentioned in her article, spelling is not the primary priority, but it is important for students to master. As mentioned before, documents with many spelling errors lose respect even if the content is respectable.

When comparing Writer's Workbench and Mac Proof in the areas of punctuation and spelling, Elray L. Pederson reports in his article "The Effectiveness of Writer's Workbench and Mac Proof," Writer's Workbench proved to
be superior in most writing qualities excluding spelling and "to be" forms in which Mac Proof demonstrated its superiority to Writer's Workbench (Pederson Title Page).

In Pederson's study, 18 pages were analyzed, nine of which were written by three famous authors, William Jennings Bryan, John F. Kennedy, and Abraham Lincoln. The two spelling checkers successfully identified most spelling errors in all 18 papers; however, they failed to identify all misspellings in all the papers. Pederson comments that the checkers did not flag homonyms and confused and misused words (8). In addition, Writer's Workbench and Mac Proof flagged three times more misspellings than the texts actually contained because of hyphenations; this was especially true in the professional essays (8). In addition to identifying hyphenations as spelling errors, Writer's Workbench may also consider proper names as misspellings; therefore, as a spellcheck program, Writer's Workbench is not a completely reliable one (Hult and Harris 101).

In regard to punctuation, Mac Proof offered no information in the Mechanical Errors check. In contrast, Writer's Workbench analyzes and counts double and single quotes, apostrophes, and many other punctuation errors of which Mac Proof gave no information. In addition, Writer's Workbench "prints any sentence that it thinks is incorrectly punctuated and follows it by its correction"
Applying the previously mentioned software to the theories of Schafer and Vale, it would be safe to assume that Schafer would most likely choose Editor and/or Edit as text editing teaching tools for punctuation. Although Writer's Workbench proved to be superior to Mac Proof, Schafer may not consider it as useful as a teaching tool for practical use in the composition classroom. However, Schafer would probably approve its use as a simple text editor with limited capabilities. In contrast, Vale would most likely choose Editor and Mac Proof for spellcheckers in her classroom as they illustrate dominance over Edit which contains no spelling tools, and Writer's Workbench which was limited in spellchecking capabilities. So far, the above mentioned programs have been evaluated for analyzing surface structures.

Moving now to formalistic operations, keeping in mind Coe's theory on form, very briefly that information is made by putting data in "formation by forming" (Coe 16); let's apply the software mentioned above evaluating its use for classroom application.

Writer's Helper II includes three activities within the "Revising Activities" section which assists students with forming paragraphs. 'Outline Document,' 'Paragraph Coherence,' and 'Paragraph Development' help students
develop their paragraphs and evaluate them for coherence and thorough development.

'Outline Document' prints the first sentence of each paragraph helping students to see "particular qualities of their writing by isolating initial sentences" (Wresch 72). With the initial sentences isolated, the students can check their documents for needed transitions, logical development of ideas, and is able to trace the progression of the essay determining whether or not the ideas are flowing smoothly from one point to the next. Students can also check to see if there is a sense of direction from the topic sentence to the concluding sentence. This activity is also helpful for students to determine if there is a consistency of tone, and point of view. Looking for consistency of tone can be difficult for students if they are looking at an entire document; using 'Outline Document,' students can look at each topical sentence alone to discern the necessity for revision.

Similar to 'Outline Document' is 'Paragraph Coherence.' 'Paragraph Coherence' prints not only the topical sentence of each paragraph, but also the concluding sentence of each paragraph. Using this activity, students may review their essay differently than they did with the previous activity; for instance, students can check to see if their intentions changed form the first sentence of their essay to the concluding sentence of their last paragraph. Many students
may start an essay with one intention or idea, but by the end of the essay, the idea is no longer the same. Because of the deletion of the middle sentences, students are better able to discover dramatic changes within their paragraphs or the entire document. Once the students discover their lack of continuity, they can then revise their paragraphs to create coherence.

Another use of 'Paragraph Coherence' is to find out if the concluding sentences simply restates the topic sentence which may indicate an underdeveloped paragraph; or if the concluding sentence demonstrates progression or growth from the beginning of the paragraph (72). The last sentence of each paragraph should do two things; first, it should show a progression of ideas from the topic sentence, and second, it should be a catalyst to the topic sentence of the next paragraph. Using this activity will help students discover, with help, the importance of coherence in their documents.

'Paragraph Development' graphs each paragraph in a document printing one star for every five words. It also prints the total number of sentences per paragraph, and an average paragraph length and total number of words in all paragraphs. It also notes paragraphs which are excessively long or short and sends a message to the students suggesting methods of revision or assistance. For instance, if any of the paragraphs are too short, containing less
than 50 words, the program will suggest that the student(s) return to the Prewriting Activities and use 'Develop a Paragraph' for further development of ideas. On the other hand, if any of the paragraphs are too long, exceeding 200 words, then the program will suggest that the student(s) check each sentence to see if it relates to the topic sentence; if not, the student(s) is instructed to either delete any disconnected sentences or move them to a separate paragraph (of course the unrelated sentences must show unity with the rest of the document before giving them their own paragraphs) (73). The instructor should explain however, that the number of words in the students' paragraphs does not define the paragraph as good or bad. Some students, in order to get the 'correct' number of words in their paragraphs will pad them with "extraneous nonsense" or simply restate the same ideas in different ways (74).

Applying 'Paragraph Development' to the classroom can be done in two ways; first, the teacher could have the students use 'Develop a Paragraph' in the Prewriting Activities. The students would learn to develop their paragraphs using "examples and details" (74). Second, the teacher could use and underdeveloped essay to show its weaknesses. The teacher would then use the 'Note Pad' to revise the essay to illustrate the difference.

Although these activities are a simplistic application to Coe's theory of form, they are useful, and with some
assistance from the teacher, students can learn to successfully form or develop their essays maintaining coherence, point of view, and tone. As one can see by looking at these three activities, they demonstrate, whether intentionally or not, a sense of progression: printing of topical sentences only, printing topical sentences and concluding sentences, and finally graphing with total number of words, sentences, and average lengths of paragraphs. Using this format, students can learn to edit their papers in a progressive manner; many students are overwhelmed by attempting to edit their entire document all at once, while still other students edit their documents quite haphazardly, missing some critical revisions.

Applying these activities to the composition classroom would prove to be beneficial as the students can apply what they have learned about form using the activities mentioned above to help them keep their creative form while achieving focus. If Coe were to evaluate this program, based on these three activities I have described, Coe would find them applicable within his theory because they do not change the form or give any suggestions for change of form, even if the need for change is obvious. It is the students' task to make any formalistic changes. Coe believes that form should be taught according to appropriateness and effectiveness and should be explained why it predominates in many types of discourse. We as teachers should also
instruct students that academic form makes critical reading easier for reader to know in "advance the outline and what is to be learned" (Coe 22). However, once the formal patterns have been learned, students can then use them appropriately, placing them strategically in the creative process (22). **Writer's Helper II** does not limit the creativity of form; what it does is assist students in maintaining focus within their form.

Although I did not work directly with these activities, just evaluating them in their written context gave me a feeling of satisfaction knowing that they could easily be applied to the composition classroom, and that they are flexible enough to apply to any form the students or writers wanted to use. What also pleased me about the program, in its entirety, was that the students are the ones who do most of the work; many programs I have seen, especially editing programs, seem to do most everything for the students. **Writer's Helper II** assists the students in creating, writing, and editing, yet the students do most of the thinking rather than the program doing it for them.

**Edit**, like **Writer's Helper II** helps students revise and develop their form on two levels, the paragraph level and the overall level. Using the "paragraph level," students can examine their document for topic sentences and concluding sentences in each paragraph; in addition, students can check for transitions, making sure their
paragraphs contain them, and contain the appropriate ones at that; they can also make sure the pronouns are linked to the correct nouns in the same paragraph (Baker et al. 5). After the students have checked their paragraphs at this level, they can then move to the "Overall Document." The "Overall Document" includes the topics and concluding sentences examining how well the ideas are developed; in addition, students can check to see that the sentence lengths are varied. Also Edit proves itself useful by displaying statistics on such details as the average number of words per sentence. Students will find this valuable to recreate a more readable document. It can also display its three post-writing screens: two screens of questions for assessing the effectiveness of the students' documents and one screen which reminds the students of the document's intended audience, purpose, format, and tone (5-6).

Coe's theory of form is clearly applied to Edit as topic and concluding sentences are deemed important both in theory and in the program. As Coe comments earlier in his article, "There is no meaning without form" (Coe 16); this statement directly applies to both the "Paragraph level" and the "Overall Document" of Edit because topic and concluding sentences as well as transitions and pronoun agreement and the development of ideas are evaluated by the student as well as the program itself. Coe would find this program helpful for novice writers or freshman.
composition students, but also limited in its capabilities. He would most likely find Writer’s Helper II to be more beneficial and more complete for any writing level.

Weathers informs his readers of three general kinds of substance which helps us identify style: "individual words, collections of words into phrases, sentences and paragraphs, and larger architectural units of composition" (Weathers 188). It would stand to reason then that these two editing programs if used together while teaching style, "could prove to be beneficial to both students and teacher because they apply to the substances of style of which Weathers spoke.

However, students need to know that when they are learning a certain kind of style, certain traits within their style such as jargon or slang need not be deemed as incorrect, even if the program judges them as being so. For example, Mark Twain wrote The Adventures of Huckleberry Finn and Tom Sawyer using not only incorrect grammar, but slang most familiar to the deep South. In contrast, a document written in military style is full of jargon only military personnel would understand. To apply my point, what would happen if these two types of style were analyzed by Editor or Edit? Chances are the two programs would each give an explosion of criticism of the documents. Granted it is important for students to learn how to use the editing features for their essays as most composition students need to apply the correct rules of writing before they
intentionally misuse them to fit their own style.

Although Writer's Workbench is capable of identifying jargon, in the general sense, the Workbench is unable to identify it if is specific to a discipline, education or psychology for example. However, Writer's Workbench does identify and highlight all the "to be" verbs such as ARE and IS which could prove that the students are not writing enough active sentences and writing too many passive ones which could tend to weaken the text. Using this particular feature, students could learn to use more specific verbs and thus create a stronger text. On the other hand, the Workbench did miss some passive sentences and considered them as correct (Hult and Harris 101).

Editor's TIGHTEN and POLISH dictionaries on the other hand, catch such writing problems as wordiness, redundancy, trite expressions, and cliches. The CONSIDER dictionary as previously described, examines the document for additional writing problems: unnecessary gender-based language, slang, jargon, colloquialisms, and commonly misused terms such as "affect" and "effect."

Applying Writer's Workbench and Editor to Weathers' theory on style seems to show conflict as they consider such things as "to be" verbs, jargon, wordiness, slang, and so on as "writing problems.‖ Weathers comments that our style reveals our attitudes and values to our readers and to ourselves. It is the art of selection giving us
the ability to choose to say who we are by what we say and how we say it (Weathers 187). Therefore, if a program discredits our style as being in error, then how is that program assisting us or supporting us in creating a style which something about who we are? The answer is simple; it does not support us at all—it simply "flags" our "errors" and allows no room for creativity of style. These kinds of programs are for editing purposes of academic forms only.

Though the programs mentioned are basically helpful ones, and in some ways applicable to stylistic editing, they primarily serve one purpose: to assist students in finding "mistakes" and "correcting" them. Although I would not recommend them for students learning new stylistic techniques, as the programs would discourage students' creativity, I would recommend them for students in basic composition classes needing the type of assistance these programs provide with writing problems most often found in basic writing classes.

Writer's Helper II also applies Weathers' theory on style to help students write their essays more effectively. Two specific activities within the category of "Structures" which assist students with style are 'Sentence Lengths' and 'Category Match.' 'Sentence Lengths' prints out a graph of each sentence in the document giving students the opportunity to check for a variety of syntactical
patterns. According to William Wresch, students who use only one sentence style may be using it correctly, and the program will not flag it as being incorrect, but if other sentence styles are used—styles that inform, elaborate, and create impact will make a paper much more interesting (Wresch 77). Weathers believes that instructors are responsible for teaching students strategies for style and that students are looking for various strategies. Instructors would first teach various stylistic strategies, have the students write their essays, and then use 'Sentence Length' to examine their work and find out whether or not the students have been applying the strategies to their writing. Also, students would discover which strategies they are applying and which ones they are not and why. Of course there may be certain strategies which cannot be forcibly applied.

'Category Match' is based on Stig Johansson's published analysis of "various types of writing based on 500 samples of writing taken from newspapers, novels, and scientific journals" (78). Johansson discovered that each type of writing, i.e. newspapers, informative, scientific, and fiction has unique ways of presenting information. For instance, definite articles such as "the" are more common in scientific writing than in fictional writing (78). In addition, 'Category Match' observes how students use articles, personal pronouns, and verb forms
and determines how their word choice compares to typical word choices described by Johansson. It puts an "X" in the category which best matches each word. This activity might easily follow one of Weathers' strategic activities for developing various types of styles--that is, the students write their paragraph in one style and then transform it to another style.

Applying Weathers' strategic activity and 'Category Match' together in the classroom would prove to be a useful and fun exercise. The students would write their paragraphs in one style on the computer, apply the 'Category Match' and confirm the style they have chosen; the students would then rewrite their paragraphs in another style, again applying and confirming the style they have chosen. The students would probably be surprised at their stylistic changes and the difference in their styles based on Johansson's criteria for each type of writing.

According to Weathers, the main purpose of this exercise is for students to learn how to add, delete, or substitute particular stylistic materials in order to change from one style to another with some ease. The ultimate purpose for the students is to learn to dismiss--"as it were--any sentence, paragraph or essay through all possible styles" (Weathers 191). Using Weathers' style and 'Category Match' together would prove then to be very useful tools in the composition classroom.
One of the revision activities in the category of "Audience" which also applies to Weathers' theory on style is 'Sweet or Stuffy.' 'Sweet or Stuffy' very similar to 'Category Match,' concerns itself with various writing styles, specifically in advertising (sweet), bureaucratese (stuffy), or fiction (tough). In contrast to Johansson's criteria for defining writing styles, i.e. pronouns, articles, etc., Gibson bases his criteria on monosyllables, long words, pronoun choice, use of "the," and contractions. Gibson gives percentages for each category under tough, sweet, or stuffy--similar again to 'Category Match' in which the X is placed in the appropriate category.

The students should use the information they receive to ascertain the effect they are trying to achieve and possibly revise their word choice if desired; for instance, if the students' intentions were to write "sweet" but the report indicated that the student was writing "stuffy," then the students would need to revise some of the I's to you's and use longer words. In any case, the students would learn how to use the activity to their advantage--that of learning different styles and manipulating them to create an interesting document.

An interesting application to Weathers' theory would be to use both of these activities in any order. Students applying both theory and activities would learn much about
identifying and using different stylistic techniques. Although these activities are the tip of the iceberg, so to speak, for learning style, they are the best activities within a program I have seen yet because they apply to the chosen theory on style and because they provide a way for students to learn style in a creative and enjoyable fashion.

Although surface structures and formalism may function differently in composition, they work together in the entirety of the composition. For instance, spelling, a task we teachers hound our students about on a daily basis, can be purposefully abused for stylistic purposes, and punctuation shares this same quality as well. What is important however, is to teach students correct spelling, punctuation, grammar, academic form and style first, and then teach them to apply what they have learned for their own creative composition. If students are taught only to be creative without knowing the basics, then how will they know what is socially correct? Applying the theories of John C. Schafer, Geraldine Vale, Richard Coe, and Winston Weathers in the composition classroom can be an asset for most composition students as they learn different writing strategies and how to apply punctuation and spelling to their form and style. In addition, applying those theories to corresponding software will illustrate a hands-on application for students, thus developing a better understanding of basic composition strategies.
Knowing the writing level of the students is a crucial factor in deciding which software to use; some software can be deceiving as it may tell the user that anyone can benefit from using it, when in fact, the program is more suited to professional writers or vice-versa. The software I have presented in this chapter is basically for freshman composition students, though Writer's Helper II could prove beneficial to both novice and advanced writers because of its completeness as a writing program. Editor, Edit, Writer's Workbench and Mac Proof are suited for freshman composition students. Advanced writers would most likely be bored and frustrated with these programs as their editing features are very simplistic and somewhat incomplete. They also lack formalistic editing qualities advanced writers look for in software.

Teachers Beware! When shopping for software for your composition students, first consider your course priorities; for example, are you focusing on surface features? If so, which ones? Is your focus on form and style and being creative with these? Look for software which completely suits your needs so that you only have to buy one program to suit all your course material, rather than buying two or three programs to cover one of your priorities. Second, consider your students' writing levels; are they freshman composition students or are they advanced writers who might feel insulted by basic writing programs? Sometimes
an instructor will find a program that seems appropriate and suits the needs of the assignments; however, once the program is introduced to the class, students may find the program too difficult, if not impossible to use. The program then becomes useless to the class and costly to the school. In contrast, the program may be too easy for the students causing them boredom and lack of challenge; again the program becomes useless and costly.

Third, consider the price and cost of the computer program. What is the difference? The price is the amount of money it takes to buy the program; the cost is the benefit or consequence of using the program. In other words, the price might be relatively inexpensive compared to other programs of its type; however, if the students are not benefiting from the program, then the cost is high because the usefulness is little or nonexistent. On the other hand, if the price seems high but the students are benefiting from it semester after semester, then the cost is low and the program has paid for itself. It would be wise for the instructor to research the program(s) desired for the course first, reading consumer reports and finding a way to do any possible hands-on research before buying the program. It might take a while to decide on the appropriate software for the class, but the benefits of "shopping around" will make the teaching and learning of composition much easier in the long run.
After evaluating the software packages mentioned in this thesis, all of which applied to the theories described, only two specific programs proved themselves to be most valuable not only to the theories presented here, but also to classroom application; these two programs are Organize and Writer's Helper II. Organize and Writer's Helper II had many quality characteristics writers look for in a software program—especially for prewriting activities. Students working with either of these two programs for prewriting could greatly benefit and learn how to write an effective and well organized essay.

Of all the programs mentioned in this chapter, Organize, Writer's Helper and Writer's Helper II demonstrate the most flexibility regarding academic or professional application. These three programs work for students starting from approximately grade eight through graduate school. It would be safe to assume that professionals would find these programs suitable for their needs as well. HBJ Writer, although a helpful prewriting program for freshman students or novice writers, would not be as helpful or as applicable to advanced college writing students or professional writers as they would find it too limiting for their use.

As mentioned in Chapter two, Murray, Sommers, and Bernhardt all believe that revising should be taught as a progressive stage of writing rather than a final one.
Most students write and revise recursively—writing a sentence or a paragraph then going back and revising what they have written, discovering new ideas, and if necessary incorporating prewriting strategies as they revise. Therefore, it would stand to reason that writing is not a three step process though most composition teachers teach this way. Although revision cannot occur, at least on paper, until there is a written product of some kind, even if it is only a sentence, revision is always constant in the writer's mind.

Although all the programs mentioned in the revision chapter are basically good ones, **Writer's Helper II** and **HBJ Writer** are the best programs applying "internal revision." However, **HBJ Writer** contains a Mechanical Review which **Writer's Helper II** does not. As mentioned earlier, these programs are applicable to almost any writing level. **Editor** and **Writer's Workbench** assist students with "external revision;" however, they also apply to Murray's "internal revision" strategy as well. As a teacher of English composition, I would recommend **HBJ Writer** and/or **Writer's Helper II** for revision as they both attend to the needs of the writer during the revision process; however, if students are using **Writer's Helper II** in or out of the classroom, I would recommend using some type of program which assists students with their mechanics. They should develop a well rounded knowledge of revising mechanical
errors without the help of a computer program as well.

If I as an English composition instructor, were given the choice of which previously mentioned programs to use in my class, I would choose three: **Writer's Helper II**, **HBJ Writer**, and **Editor**. **Writer's Helper II** assists students from the very beginning of their paper, from prewriting to organizing to revising. **HBJ Writer** also assists students with prewriting, but is limited to invisible writing. In regard to revision, it helps students revise on a conceptual level combining organization and style with the mechanical works within the revision process. **Editor**, though it does have some good "internal revision" capabilities, seems to prove itself more valuable in "external revision."

As a final note, I don't think it is necessary for the students to use all of these programs for one document; however, it would be wise to have all three of these, if financially possible, available to the students to use for various assignments and any troubleshooting they may want to use for their documents. Most classrooms can only afford one program for the students to use, in which case I would recommend **Writer's Helper II** with the knowledge of revising mechanical errors without computer assistance.
BIBLIOGRAPHY


